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| OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, P.C. 1940 DUKE STREET ALEXANDRIA, VA 22314 | | | | |
| EXAMINER | | | | |
| SZEWCZYK, CYNTHIA | | | | |
| ART UNIT | | PAPER NUMBER | | |
| 1791 | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary

Application No.

10/550,736

Applicant(s)

THELLIER ET AL.

Examiner

CYNTHIA SZEWCZYK

Art Unit

1791

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 December 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-23 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 13-23 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 December 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
- Paper No(s)/Mail Date _____

- 4) ☐ Interview Summary (PTO-413)
- Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. 112 2nd paragraph rejection of claim 20 is withdrawn in view of amendments.

Claim Objections

2. Applicant is advised that should claim 13 be found allowable, claim 23 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

Claim Rejections - 35 USC § 102

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 13, 17, and 19-23 are rejected under 35 U.S.C. 102(b) as being anticipated by MORIN (US 6,138,477).

MORIN teaches a process and apparatus for the forming of glass plates with complex shapes. MORIN discloses that the method could be used on one or more sheets at a time (col. 3, lines 37-39). MORIN discloses that the glass sheets are first sagged due to gravity (col. 3, lines 35-36) as in instant claim 13. MORIN discloses that the female mold is raised to be brought into contact with the male mold (col. 5, lines 2-4) (placing a central region of instant claim 13). Since the specification and claims do not

offer a strict definition for "a skirt" and the Merriam Webster Online dictionary defines a skirt as "a part or attachment serving as a rim, border, or edging", the examiner has interpreted the periphery of the male mold as the skirt. MORIN discloses that the bending occurs in a bending cell (abstract). Since the female mold raises the glass sheets, the glass sheets are inherently continuously supported on the female former while being lifted towards the male mold. MORIN discloses that the glass is pressed between the male and female molds (col. 3, lines 31-34) (pressing of instant claim 13). MORIN discloses that a vacuum is applied to the glass through the male former (col. 5, line 5). Since MORIN discloses that the glass is pressed between the male and female molds (col. 3, lines 31-34), it is inherent that the application of the partial vacuum commences after the upper glass sheet has made contact with the male former. MORIN discloses that the male and female former are separated with the glass remaining in contact with the male mold (col. 5, lines 8-10). MORIN discloses that the male mold has a convex surface (abstract). MORIN discloses that a cooling support is brought beneath the male former to take the sheets away for cooling the glass outside the bending cell (col. 5, lines 10-12).

Regarding claim 17, figure 2 of MORIN shows that the sagging occurs in an area inscribed entirely within the female mold and that the female mold is brought up towards the male mold.

Regarding claim 19, MORIN discloses that the glass undergo a tempering of approximately 550 °C before bending (col. 5, lines 55-57), which is included in the range of instant claim 19.

Regarding claim 20, see the discussion of claim 17. MORIN discloses that the operation occurs in a furnace (oven of instant claim 20) and the figures 1-4 show that MORIN contains a system for transporting the glass as in instant claim 20. MORIN also discusses means for discharging the female mold from the glass (col. 5, lines 8-10) and means for moving the female mold vertically (col. 6, lines 27-29).

Regarding claim 21, MORIN discloses that a vacuum is produced at the periphery of the male mold (col. 6, lines 53-55) wherein the periphery is interpreted to be a skirt.

Regarding claim 22, MORIN discloses that the method results in a glass with a coefficient of non-developability of greater than 5 (col. 3, lines 10-12), which is incorporated by the range of instant claim 22.

Regarding claim 23, see the discussion of claim 13. The vacuum means in the male former indicate that the male former is air-permeable.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
6. Claims 14, 16, and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over MORIN (US 6,138,477).

MORIN teaches a process and apparatus for the forming of glass plates with complex shapes. MORIN discloses that the apparatus can produce glass plates that are complex shapes such as spherical (col. 3, lines 42-43). MORIN also discusses that

the shape may be imposed by the male mold (col. 3, lines 46-47). MORIN discloses that cylindrical is a simple shape for glass sheets (col. 2, lines 26-29) therefore, it would have been obvious that if the method of MORIN was capable of producing complex shapes, it would be capable of producing simple shapes that are cylindrical as in instant claim 14.

Regarding claim 16, MORIN discloses that the apparatus includes a reheating furnace with a conveyor (col. 5, lines 51-52). It would have been obvious to use a tunnel oven as in instant claim 16 because it fits the description of the heating means described by MORIN.

Regarding claim 18, it would have been obvious to a person having ordinary skill in the art to support the glass slightly away from the edge because supporting on the direct edge would not have provided adequate support for the glass sheet during bending and increased the risk of misaligning the glass sheet to the support. A person of ordinary skill could have reached the range of instant claim 18 through optimization testing. Therefore, the claimed invention would have been obvious.

7. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over MORIN (US 6,138,477) in view of REESE (CA 2058729).

MORIN teaches a process and apparatus for the forming of glass plates with complex shapes. MORIN discloses that a vacuum is produced at the periphery of the male mold (col. 6, lines 53-55). It would have been obvious that producing a positive

gas pressure in the center of the male mold because it would aid in producing the shape of the male mold. MORIN is silent as to the material of the molds.

REESE teaches a method of bending glass sheets between a bottom outline mold and an upper vacuum press face. REESE discloses that the glass sheets are preliminarily shaped by sagging and then press bent (p. 1). REESE discloses that the upper vacuum mold is covered with a woven fiber glass to insulate the upper surface of the glass and aid in diffusing the vacuum flow (p. 14). It would have been obvious to use such a cover on the male mold of MORIN because it would protect the surface of the glass which would result in higher optical quality. Therefore, the claimed invention would have been obvious.

Response to Arguments

8. Applicant's arguments filed December 12, 2008 have been fully considered but they are not persuasive. Applicant argues on page 8 that MORIN does not teach continuously supporting the glass sheets, however, the claims are written such that the glass sheets are continuously supported only during the placement step. Applicant argues on page 10 that the pressing step of MORIN occurs after the partial vacuum has commenced, however, it is clear that when the glass sheets are placed into contact with the male former (col. 5, lines 3-5), there would be a brief pressing before the vacuum has commenced. Applicant argues on page 10 that it would not have been obvious to provide a pressure difference through the surface of the male mold, however, MORIN suggests this on col. 6 lines 62-63 when MORIN discloses that it is desirable for contact

at the central part of the glass sheets to be much less violent. Additionally, if MORIN provided a vacuum in the periphery and not the center portion as he seems to suggest (col. 6, lines 53-55), that would indicate a pressure difference through the surface. Additionally, the specification and claims do not offer a strict definition for "a skirt" and the Merriam Webster Online dictionary defines a skirt as "a part or attachment serving as a rim, border, or edging". Therefore, the interpretation of a periphery of the male mold as the skirt is applicable.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to CYNTHIA SZEWCZYK whose telephone number is (571)270-5130. The examiner can normally be reached on Monday through Thursday 7:30 am to 5 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Steven Griffin can be reached on (571) 272-1189. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/ Carlos Lopez/
Primary Examiner, Art Unit 1791
CS